

BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

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JUL 15 1993

In the Matter of

Amendment of the Commission's
Rules Concerning Maritime
Communications

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PR Docket No. 92-257
RM - 7956
RM - 8031

REPLY COMMENTS OF ELECTRONIC COMPANY OF NEW ZEALAND

The Electronic Company of New Zealand ("ECONZ") , by its attorneys, pursuant to the provisions of Section 1.415 of the Rules and Regulations of the Federal Communications Commission ("FCC" or "Commission") hereby submits its Reply Comments in the above referenced proceeding in which the Commission has adopted a Notice of Proposed Rule Making and Notice of Inquiry ("Notice") designed to review present requirements and future trends concerning maritime communications.^{1/}

I. INTRODUCTION

In this proceeding, the Commission proposes rules to reclassify public coast stations as non-dominant common carriers and to allow private land mobile entities to share certain maritime frequencies. The FCC seeks information to assist it in formulating rules and policies for the maritime services that will increase safety, promote flexibility, reduce congestion, and remove unnecessary impediments to the economic well being of the maritime

servicing. It has also developed a number of unique, innovative products customized for specific applications.

One of those products is Sealink, developed by ECONZ at the request of Telecom Mobile Radio, the New Zealand entity providing maritime communications, as well as other mobile communications services in that country.^{2/} Sealink is designed as a link or gateway to and from marine VHF communications transmitters and the public telephone network. Under the Sealink system, a vessel is able to directly and automatically access the telephone network. After dialing the desired telephone number, a voice prompt acknowledges your call by repeating a unique Sealink number and within 10 seconds a normal ringing tone is heard.

From the shore, there is not a direct link to call a boat. However, a service number has been established for land based callers to reach vessels. By calling the number, a land based caller is connected to a store and forward switch, which automatically logs the vessel ID and the telephone number to be called. To establish the call, the vessel may check at any time for calls logged to it. If a call is logged in, a call voice prompt guides the vessel to automatically set the call up to the originating party.

The transmitter can also be employed as a repeater, by keying 333*, thereby allowing direct ship to ship calling. Finally, the Sealink system may be used for emergency purposes. If 999 is keyed, it overrides an established call and notifies the shore based operator of the distress situation, as well as the details of the ship that has sent the call.

In this proceeding, the Commission seeks to improve the communications capabilities of maritime operators. Among other issues raised is the use of Digital Selective Calling ("DSC") and automatic interconnection with the public switched telephone network ("PSTN"). Both of these modifications, as well as others specified in the Notice, to current operations may potentially

^{2/} A similar system, SeaPhone, is in place in Australia. The two systems are similar in features and operation. Unless specifically noted, the description of the system is applicable to Sealink. Promotional material describing Sealink and a map showing its coverage area are attached as Exhibit A.

However, ECONZ believes that by requiring that all stations operate with full DSC capabilities by 1997 or 1999, unnecessary economic burdens will be placed on coast station operators and vessel owners. As ECONZ discusses further below, Sealink technology can accomplish the goals the FCC is attempting to foster in the mandatory use of full DSC equipment. Yet, to equip vessels and coast stations with Sealink or other equipment will be significantly less costly than the modification of equipment to use DSC equipment. Accordingly, marketplace forces, rather than FCC edict, should dictate the equipment ultimately employed in the maritime industry.^{3/} Because of its interest in this proceeding, therefore, ECONZ is pleased to have the opportunity to submit the following Reply Comments.

A. Mandatory Use of Full DSC Technology

Many of the parties submitting initial comments supported the Coast Guard's request to mandate the use of DSC equipment. However, Marine

market forces, not the FCC, should determine the type of signalling employed by licensees.

ECONZ recognizes the benefits the Coast Guard perceives in the mandatory use of full DSC equipment. Nevertheless, its use would unnecessarily increase the cost of all maritime VHF equipment. Similar benefits, with substantially reduced cost, could be realized with the use of Sealink technology. In order to utilize the public correspondence facilities of the DSC format, all providers would be required to add channel 70, as would all Coast Guard stations. While the addition of channel 70 to Coast Guard stations would be at public expense, installing channel 70 equipment at public coast facilities would be a substantial burden to an industry that the Commission recognizes as suffering from loss of customers.

Use of Sealink technology, as an alternative, would not require the addition of channel 70 to all public coast stations. Sealink technology is capable of handling multiple call signalling, including the following:

| | |
|------------------------|-----------------|
| Sealink (New Zealand) | Sequential DTMF |
| SeaPhone (Australia) | Sequential DTMF |
| CIMAT | FFSK |
| French National System | DTMF |
| DSC | FFSK |

After the initial call is received by the Sealink system, it processes the call as a standard Sealink subscriber. This includes all the normal call progress indicators and digitized voice announcements. Calls with the DSC format can be placed on any working channel in the Sealink environment, eliminating a requirement for separate channel 70 equipment for public coast station operators. This would leave channel 70 for DSC emergency reporting to the Coast Guard.

In addition to eliminating the need for using a separate channel 70, the mandatory conversion to full DSC will result in the requirement to purchase costly equipment. ECONZ estimates, based upon New Zealand pricing, that full featured DSC equipment will range from between \$1000 to \$3000. Add on units would likely cost between \$500 and \$1500. These costs may be acceptable for

personnel. However, the same calculus does not apply to non-convention and recreational vessels. For these entities, the critical element to the acceptance of public correspondence station equipment is its cost. When the add-on unit costs three to four times the radio itself, it is unlikely to receive widespread acceptance.

Alternatively, the Sealink product structure is significantly less expensive. The current terminal unit price is less than \$350 and less than \$80 for an add-on "smart" microphone. This makes Sealink a very attractive alternative to DSC technology. Sealink is fully operational in New Zealand, and the similar SeaPhone system operated in Australia with 16,000 customers.

The Commission asks whether it is implicit that there would be a reduced watch on VHF channel 16 if DSC capability is required. ECONZ believes that until it is mandatory for all vessels to have a VHF radio with DSC emergency calling, the Coast Guard will be required to provide some type of watch on a 24 hour basis in support of its Safety of Life at Sea ("SOLAS") requirements. Accordingly, boaters should still be able to rely on the Coast Guard to respond to manual or non-DSC distress calls.

The FCC inquires whether the Coast Guard matrix is sufficient to specify minimum DSC capabilities. ECONZ believes that the matrix is sufficient. It is not necessary for the Commission to make automated DSC public correspondence signalling a mandatory requirement. This requirement, because of the increase in cost that would result, would not be in the public interest.

B. Other Matters

1. Telecommunications Requirements

The Notice asks what new and additional mobile telecommunications requirements will arise for the boating industry, how those requirements will impact the need for telecommunications capacity and capability and whether these requirements will be satisfied through other services.

ECONZ believes that there will be a variety of new maritime telecommunications requirements and that, unfortunately, today's regulations are not responsive to those needs. Many of the advanced features that have developed for other communications services will find their way into the maritime field, including data, facsimile, and other value added services. The National Marine Electronics Association ("NMEA") notes that automatic telephone interconnect, the transmission of facsimile and data between vessels and ship to shore, voice mail and even video services will be demanded by maritime users.^{5/}

ECONZ agrees and notes that in order to meet these requirements, more channels will be required and the way by which they are assigned must be modified. To the extent maritime services cannot meet these demands, they will be satisfied by other communications providers. Changes to the regulations are necessary, therefore, to allow maritime operators to compete on a more equal footing with other mobile communications providers. There is no reason why maritime communications cannot be a valued deliverer of communications services to the maritime community. Many users within the community already have VHF maritime equipment installed. By adding on equipment that employs technology like that included in the Sealink system, which can be accomplished at a reasonable cost, maritime customers can avail themselves of this enhanced communications capability. Alternatively, new VHF radios, equipped with Sealink and similar technology, available at prices comparable to today's VHF equipment, can offer better services, to the extent permitted by the regulatory structure.

2. Trunking

Many parties submitting initial Comments were not enthusiastic concerning the potential use of trunking technology on maritime

^{5/} Comments of NMEA at p. 4.

frequencies.^{6/} While ECONZ sees no technical impediments to the utilization of trunking technologies, it agrees that the employment of this technology would necessitate a coordinated worldwide effort in order to prevent inconsistencies from country to country. Moreover, based upon the current 25 kHz channelization in the U.S., it is unlikely that an effective trunking solution would even be feasible unless additional spectrum could be made available. Nevertheless, should it be required, ECONZ is capable of providing a version of the Sealink infrastructure that can interface to a trunked platform.

3. Automatic Interconnection with the PSTN

The Commission posits that one possible cause of the displacement of public coast stations by the cellular industry is the inconvenience of placing a call through a public coast station which must manually interconnect to the PSTN. ECONZ agrees with the many parties submitting initial Comments supporting the introduction of automatic interconnection.^{7/} ECONZ recommends that private interconnection be limited, so as not to provide additional competition to existing public correspondence licensees.

The Commission asks if automation will have an effect on safety. ECONZ does not believe that automation itself will have a negative effect on safety. In the U.S., safety and public correspondence are handled by separate organizations. Nevertheless, as has been accomplished in New Zealand, it is possible to link those entities together in an automated fashion to provide better service to the public.

The Commission asks if it should consider signalling and identification schemes other than DSC. ECONZ strongly believes the Commission should. As

^{6/} See, e.g. Comments of NMEA at p.5 and Comments of the Radio Technical Commission for Maritime Services ("RTCMS") at p. A-3.

^{7/} See, e.g., Comments of KFS World Communications at p. 10: "Allowing interconnection for both HF and VHF coastal stations is essential for making radio voice and data services competitive with cellular and satellite based services. Automatic interconnection should be a top priority".

noted above, the Sealink system is capable of handling multiple format decoding including DSC at a very reasonable cost. Sealink is fully operational in New Zealand, while the similar SeaPhone system in Australia is in use with approximately 16,000 subscribers.


4. Spectrum

ECONZ agrees that the growth of the maritime services may be limited by the amount of spectrum available for its use. Accordingly, it urges the Commission to pursue both narrowband and spectrum sharing alternatives. The use of narrowband, in particular, is supported by many commenting parties.^{8/} The narrowband proposal that will be considered by the International Radio Consultative Committee ("CCIR") is a reasonable solution, particularly because

WHEREFORE, THE PREMISES CONSIDERED, The Electronic Company of New Zealand hereby submits the foregoing Reply Comments and asks that the Commission act in a manner consistent with the view expressed herein.

Respectfully submitted,

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Zealand

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Dated: July 15, 1993

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EXHIBIT A

AUCKLAND VESSEL OWNERS

**Go Automatic with
SEALINK!!**



*Auckland vessel owners - and that means you, can now invest in
Telecom Mobile Radio's new Sealink service.*

Since 1989, Telecom Mobile Radio has operated the land mobile radio service (RT's), and is now using its base station network to provide the Sealink service.

The national service has channels covering the Bay of Islands, Whangarei, Tauranga, Wellington and the Marlborough Sounds, as well as Auckland Harbour and the Hauraki Gulf.

The new service will be charged on the basis of an annual registration fee of \$50.00 and a flat rate per minute per call of \$1.40 including GST for vessel to shore calls.

To take advantage of the Sealink Service, you need to:

1. Contact a Telecom Mobile Radio Approved Sealink Service Provider.
2. Register for Sealink and be logged on for the trial period.
3. Either:
 - a) Purchase a TMR Sealink microphone to fit to your existing marine radio telephone.
 - b) Bring your GME GX558 radio (compatible with Sealink), into your Sealink Service Provider for reprogramming.Or:
 - c) Purchase a new GME GX558 set, already programmed for Sealink.

Sit back and enjoy the luxury of Instant communication while you're at sea!

If you are an existing Radphone user and don't wish to register for the upgraded service, you no longer need to call Auckland Radio on Channel 16. Simply hold down the push to talk button on your microphone on Channels 2, 24, 25, 26 & 27 for four seconds to contact a Sealink operator for assistance.

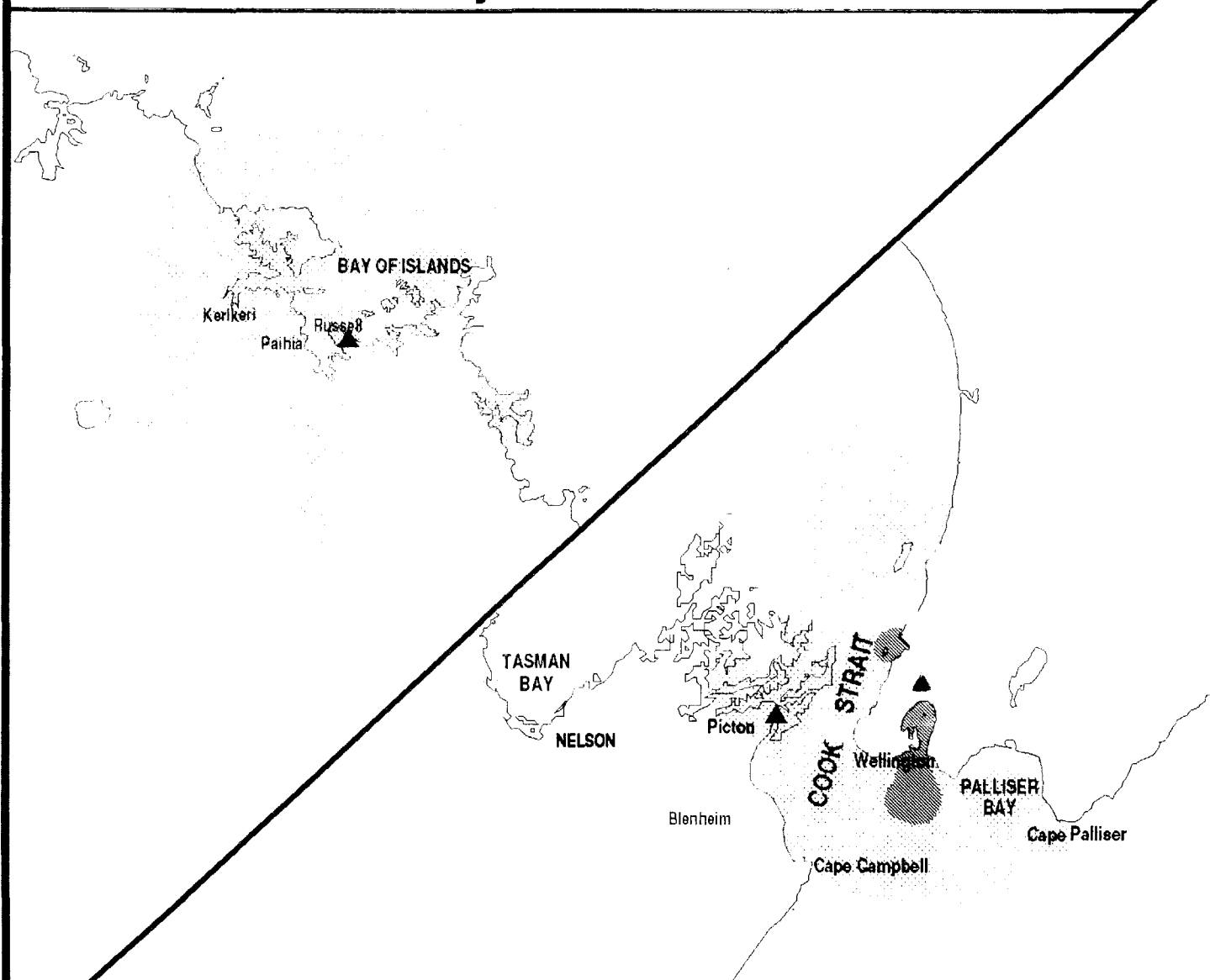
Shore parties wanting to make contact with a vessel should dial 08361 from 16/12/91 for operator assistance.

ACT NOW!

**Call a Telecom Mobile Radio
Approved Sealink Service
Provider - or call our Sealink
helpdesk: free on:**

0800 800 654

Bay Of Islands



KEY

▲ Denotes Radio Site

□ Channel 02

■ Channel 27

Although the coverage areas shown on this map represents the general coverage for the SEALINK Marine Autophone Service, there may be pockets within the shaded areas where communications may be poor or non-existent. Likewise there will be areas where communications may be possible outside the shaded area

March 1992

Wellington & Marlborough Sounds

General Coverage Area: Northern Region

EXHIBIT A

